# Chemical Age

VOL. LXXIV

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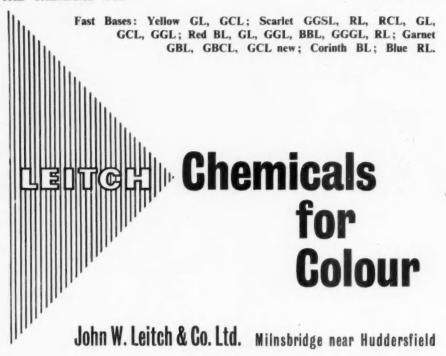
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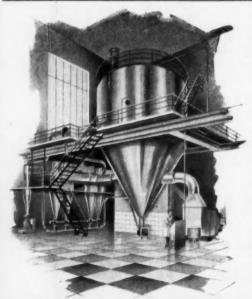
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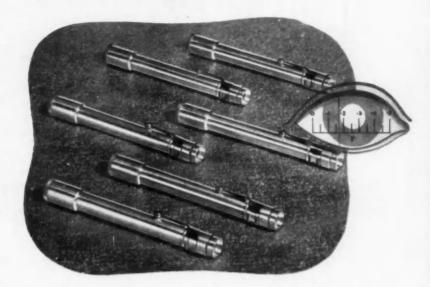
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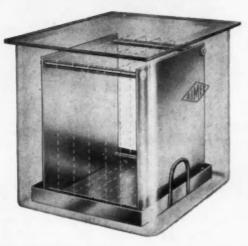
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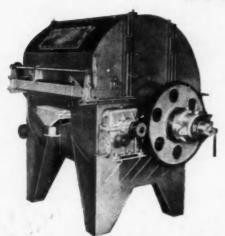
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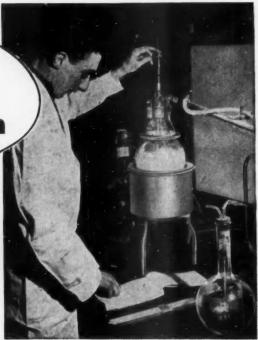
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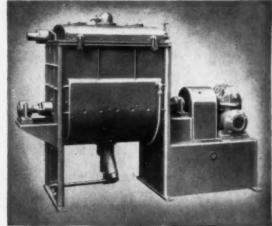
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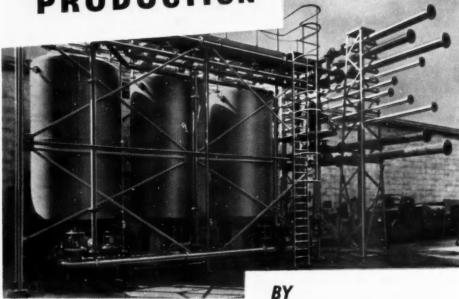
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# The Chemical Age

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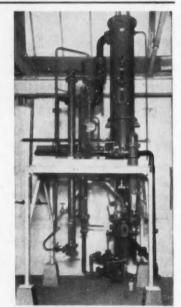
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### A Chemical Trade Fair?

THE recent announcement that the London BIF is to cease came as no surprise, for the pattern of trade fairs has been changing in recent years. There has been a growing tendency for individual trades to break away from general fairs and to hold their own exhibitions. Many of the industries which previously took part in the London BIF have now grown too big to participate in general fairs, and it is natural that they should wish to concentrate their resources and efforts on exhibiting at specialized exhibitions.

The Board of Trade, in the blundering, heavy-handed way of Government departments, has demonstrated its complete lack of responsibility in the timing of its announcement that the London BIF is to be discontinued. Only a few weeks before the opening of the fair, the Government, usually so slow to act, has blurted out its message like a gauche child. Just as all the plans had been made and the preparations nearly completed the Board of Trade threw cold water over the whole affair.

Such gross mismanagement has already resulted in the London BIF being described in some quarters as a 'dead duck'. The majority of chemical firms taking part in the fair feel that the announcement is disappointing. looked upon as extremely bad publicity for the exhibition because most visitors will probably think that a dving fair will be a poor effort. Indeed, it is thought that many prospective visitors to the London BIF will not, for this reason, take the trouble to attend. Surely, the Board of Trade, without overtaxing its intellectual powers, could have foreseen that making its announcement before instead of after the fair would only damage exhibitors' prospects.

The decision is particularly disheartening as the chemical section of this year's BIF is the most comprehensive ever held; more than 100 chemical firms will be taking part. Exceptionally hard work has been put in by the staff of the Association of British Chemical Manufacturers, who have been working almost 16 hours a day. The Association has, in fact, announced its intention to make the chemical section a success, and it will undoubtedly do much to enhance the reputation of the British chemical industry.

It cannot be disputed that the London section of the BIF has made an important contribution to the development of British trade, particularly its exports. But in recent years there has been increased participation in international trade fairs and in many all-British trade fairs. The result is that the London section of the BIF has gradually come to represent only a small proportion of British industry. This suggests that the fair is not the best way to support the export drive. alternative policy pursued by many firms -exhibiting at overseas trade fairs-has, however, its disadvantages. Small firms find it very difficult to make a respectable showing far from home and are not able to provide adequate follow-ups.

Arguments have, of course, been made both for and against participation in general fairs. It has been said that the greater number of visitors attending general fairs is to the advantage of individual trades, as more people are likely to visit, say, the chemical section of the BIF than if it were housed in a separate exhibition. This, however, seems open to some doubt. It appears unlikely that anyone not interested in chemicals would visit the section, unless he did so purely for his own interest, or to kill

time! But even if the argument is correct, and chemical stands at a general fair are better attended than at a specialized fair, it seems unlikely that the exhibitors benefit materially. Their prestige may possibly be improved, but do they receive any more orders?

This brings us to the question of what constitutes a successful fair. On what criterion should the success of an exhibition be based? Correspondence published in The Times last year revealed a dangerous tendency on the part of at least one exhibition organizer to regard trade fairs as an end in themselves. Presumably record crowds attending an exhibition are sufficient to deceive some organizers into acclaiming it an 'unqualified success'. Quantity not quality is what some people aim at. The schoolboy, the bored housewife, the nanny seeking refuge from the rain appear to count for as much as the foreign buyer.

Mr. Peter Thorneycroft, President of the Board of Trade, in making his announcement in the House, said that the results of the fairs in 1955 and 1956 were such that the directors of British Industries Fair Ltd. had informed him that the Treasury guarantee of £100,000 would be insufficient to enable the company to carry on and to meet its liabilities. After full consideration the Government had decided that, while they would meet by a supplementary estimate the net liabilities over and above the guarantee, and waive recovery of the £100,000 to be paid under it, it would not be right to provide public money for the fair after the Olympia Fair in April, which would be the last to be held in London.

This statement, however, seemed to conflict somewhat surprisingly with the reported comments of Kenneth Horne, managing director of British Industries Fair Ltd., who described the decision as a bitter disappointment. He said that during the eight months in which he had been managing director of BIF Ltd., support had been increasing. In the 1956 London sections of the Fair, we shall have had 120 more exhibitors than in 1955. In 1957, because of requests by additional sections of industry, we had planned three fairs in London alone. The board of BIF Ltd. has told the Govern-

ment that from the end of 1957 we expect to be self-supporting. We also said that if the fair were to become international then financial success seemed certain', he added.

Mr. Thorneycroft's statement to the House went on to say that the Government were convinced that in the changed circumstances of today, public money could be more effectively used in other ways for the promotion of our export Accordingly, the Government intended that the money hitherto spent on publicity for the fair would in future be used by the Board of Trade mainly in connection with overseas fairs and exhibitions at which British goods were shown and the prestige of our products upheld. The Government would consider, in consultation with the main industrial organizations concerned, how this could most effectively be done, he added.

The chemical industry will no doubt await the outcome of this 'consultation' with great interest, for a factor of significance concerning British trade fairs is that no exhibition has ever been held in Britain exclusively for chemical manufacturers on a scale comparable to the chemical section of the London BIF. The chemical industry is Britain's fourth largest exporting industry. It therefore plays a part of sufficient importance in the national economy to merit the organization of its own fair. The member firms of the Association of British Chemical Manufacturers could well form the nucleus of such an exhibition, though it should, of course, be the object of the organizers to make the fair as representative of the industry as possible. An exhibition of this nature could be expanded to international status, thus bringing it into line with most of the important European trade fairs. the cessation of London section of the BIF, the formation of an international chemical fair, in London, would be most timely. The Chemical Section at the fair which opens at Olympia on April 23, will whet the appetite of buyers; let us give them a right royal feast in 1957 or With energetic support from its members the ABCM is capable of putting of a show equal to, if not superior, to any other chemicals exhibition in the world.

### Notes & Comments

#### Sublimation

OME notes recently published in Industrial & Engineering Chemistry (1956, 48 [3], 19A) show once again that ancient practices of chemistry can be regroomed to make successful comebacks. As a method for purification, sublimation may seem to many to belong almost to the period of alchemy, but a US chemical engineering company has now designed a continuous sublimation plant which is said to have a wide range of application at economic costs. If product purification can be achieved by distillation or crystallization, the sublimation method would not be competitive; but when simpler methods fail or cannot succeed unless they are cumbersomely operated, a product that will in fact sublime may well be more efficiently purified in this way.

#### Specific Design Necessary

THE material descends through a series of slowly revolving trays; hot aif or a hot inert gas is circulated as the source of heat. The air or gas is also, of course, the carrier of the vaporized material, and it is continuously 'stripped' in a condenser before being recycled in the main unit. Impurities accumulate at the bottom of the sublimation unit, and may be removed continuously or occasionally according to their rate of accumulation. Sublimation units would seem to require specific design-the vapour pressure of the product is a major factor. Also, a product must have a vapour pressure of at least I mm. of mercury at its softening or melting point if the sublimation method is to be economically operable. A maximum operating temperature of 600° F is mentioned, but this may be no more than an initial restriction.

#### Having it Both Ways

Some Members of Parliament would seem to have a very limited sense of justice. Last month in the debate on the supply estimates, several of them attacked the fertilizer industry although on all sides of the House there was sup-

port for the increased subsidies for fertilizer purchase. Yet the supply of fertilizers has been referred already to the Monopolies Commission, and whether there are undesirable agreements among manufacturers to maintain prices, whether in fact the 'market' is 'rigged', might surely be left undiscussed while it is sub judice. Members of Parliament are, of course, privileged, but this should not mean that their sense of fair play can be suspended at whim or will. The fertilizer industry can confidently wait upon the Monopoly Commission's verdict, but meanwhile it is difficult to reply to the smearing suggestions that were made in the House. One Member at least suggested that last month's probings into these questions of fertilizer price were 'improper'. He might have added that some of the questioning was also ill-informed.

#### **Assurances Called For**

7HEN the use of a commodity is being supported by grants of public money, the commercial supply of that commodity is naturally likely to be widely scrutinized. The taxpayer as well as the farmer should be assured that the best possible value is being obtained. However, mere resentment that fertilizer prices, like those of most other commodities, have risen in recent history is not much of a base for criticism. Who could expect the cost of nitrogen-whether 'fixed' synthetically or by-produced from coal-not to ascend when major increases were made to the price of coal last summer? Nor is the economy of phosphatic fertilizers much easier when the predominant source of raw material is situated in troubled North Africa. Who should not be content about prices in this country when international surveys by such bodies as FAO and OECC show that our farmers are paying about the same prices for fertilizers as those paid by farmers in other countries in Western Europe? As for nitrogen in particular, producers can in fact obtain a better price by export selling than they obtain at home! Recent monthly figures from the Board of Trade

have shown sharp increases in our export sales of nitrogen, and this may well explain why—as one Member stated in the debate—the balance of supply and demand this spring has been fairly tight.

#### IN THE EDITOR'S POST

#### Fluoridation of Water

SIR,—I fear that this correspondence will become a discussion in moral theology, but I cannot allow Mr. Stocker's reductio ad absurdum to pass without pointing out some of the 'fluors' in it.

I don't like accusing Mr. Stocker of failing to see any other point of view but his own, but that is what his letter indicates; for his most ingenious paradox is no paradox at all. Because he would accept something when he knows it is good for him, he assumes everybody else will do the same, ignoring the distinct possibility that some people may reject it even though they know that that which they reject is good for them. An example is the hunger strikes of the suffragettes or on a somewhat higher plane those of Mahatma Ghandi. It is all a matter of faith.

However, Mr. Stocker misunderstands me if he thinks that I would not drink fluoridated water just because it contains fluorine (incidentally I do not like tea and so would never make a civil servant). I probably shall after being assured by the medical profession that it is to my advantage to do so.

What I protest against is not being given the chance to choose. I am a man having free will and I demand to exercise that free will.

Mr. Stocker, Sir, would I feel have made a Grand Inquisitor; for he has similar intentions, wishing however to save my body instead of my soul, whether I will or no. This is the moral argument.

There is a further one on a lower material plane, that of personal safety. Fluorine may be advantageous to my teeth, but nobody knows yet if it has any other effects. I may be allergic to fluorine as it may have some hitherto unsuspected effect; iodine did. I object to being compelled to act as a guinea pig in some vast medical experiment. I may volunteer to be a subject—I have in the past—but I will not be coerced.

What will Mr. Stocker feel like if the experiment is a ghastly failure? Dr. Jenner was hailed as a courageous hero after he had successfully vaccinated his son; but what if it had failed? He would have been vilified as an inhuman monster to sacrifice his son on the altar of science.

Having no desire to be a sacrificial victim, I remain, Sir,

Yours truly, P. W. G. RAYNER.

Luton.

#### Du Pont Sales Up

DU-PONT of Canada Securities Ltd, and its wholly owned subsidiary Du Pont Co. of Canada Ltd. report increased sales and earnings for the year ended 31 December, 1955. Sales amounted to \$65,461,474, an increase of 18 per cent over 1954's \$55,572,000. The increase is attributed to improved business conditions in Canada combined with foreign demand for certain products.

Net profit amounted to \$6,368,976 equal to 86 cents per share of common, compared with \$4,213,000 or 51 cents per share of common in 1954 when earnings were adversely affected by costs necessarily incurred during the initial operating period of the Maitland (Ontario) nylon intermediate

In discussing operating results, the report noted that demand for synthetic fibres was stronger in the textile, industrial and export markets. This increased demand for nylon flake and fibres resulted in the Maitland plant operating substantially at capacity throughout the year and in reduced unit manufacturing costs of these products. Average selling prices were lower but the price reductions on nylon yarns and staple were not felt through all of 1955.

Expenditures on new construction amounted to \$3,876 000. Projects under construction at the end of the year on which unexpended balances totalled \$10,100,000, included an automotive finishes plant at Ajax, Ont., a commercial explosives plant near North Bay, Ont., and further expansion of cellulose film and nylon facilities.

M. Francis Perrin, High Commissioner for Atomic Energy, said in Paris recently that the production of plutonium in France would begin in 1958.

### The Value of Chemical Exports

#### UK, US & West Germany Compared

THE forthcoming BIF will undoubtedly attract considerable attention to the British chemical industry, for the Association of British Chemical Manufacturers has announced its intention to make the fair an outstanding success. More chemical manufacturers than ever before will be exhibiting in the chemical section, and a record number of overseas visitors is expected.

It is difficult to assess an industry through an exhibition, however representative of the industry the exhibition may be. After the welter of publicity that has been given to the BIF, the visitors to the fair may wonder how the British chemical industry stands in relation to those of its major competitors, the US and Western Germany. It is therefore appropriate to examine and, so far as possible, compare those industries.

The British chemical industry is now the country's fourth largest exporting industry, sending overseas one-third of its annual production. Total chemical exports for 1955 increased to £232,818,505 from £204,452,711 for 1954, an increase of 13.87 per cent. Exports for 1953 amounted to £178,050,855.

Exports of inorganic and organic elements and compounds in 1955 increased to £53,032,233 from £50,573,978 in 1954 and £47,621,533 in 1953.

Exports of medicinal and pharmaceutical preparations in 1955 rose to £35,896,600 from £32,096,482 in 1954 and £28,655,775 in 1953.

The value of Britain's exports of essential oils, perfumes etc. in 1955 was £25,377,209 compared with £20,935,002 in 1954 and £18,694,351 in 1953.

#### Great Improvement

Plastics materials exported by the UK in 1955 amounted to £22,809,663 against £20,531,455 in 1954 and £16,545,756 in 1953.

Exports of paints, pigments and tannins in 1955 are valued at £21,410,324, an increase over the 1954 figure of £17,983,939 and the 1953 figure of £15,806,899.

Britain's exports of synthetic dyestuffs fell in 1955 to £9,807,409 from £10,700,397 in 1954. The figure for 1953 was £8,356,919.

Exports of tar products in 1955 amounted

to £4,311,214, continuing the downward trend. The value for 1954 was £4,509,066 and the 1953 figure was £5,461,976.

The value of Britain's exports of all fertilizers in 1955 was £4,031,402 against £7,016,060 for 1954 and £8,454,485 for 1953.

#### American Exports

The value of America's exports of chemicals and related products jumped in 1954 to \$1,003,803,00 from \$819,213,000 in 1953, an increase of 22.02 per cent. Export figures for 1955 are not available, but the latest estimates state that production for 1955 was a record. Chemicals are now America's fourth largest industry.

Chemical specialities exported by the US in 1954 are valued at \$326,194,000 against \$266,682,000 in 1953, \$221,169,000 in 1952, and \$281,380,000 in 1951.

America's exports of medicinal and pharmaceutical preparations in 1954 amounted to \$243,810,000, an increase over the 1953 figure of \$216,704,000. The value of exports for 1952 and 1951, respectively, were \$221,169,000 and \$281,380,000.

The value of America's exports of industrial chemicals in 1954 was \$149,901,000 compared with \$118,989,000 in 1953, \$129,726,000 in 1952, and \$172,779,000 in 1951.

Exports of pigments, paints and varnishes in 1954 amounted to \$105,074,000, an increase over the 1953 figure of \$84,393,000. The values for 1952 and 1951 were \$78,645,000 and \$103,174,000, respectively.

America's exports of coal tar products in 1954 amounted to \$75,842,000, compared with \$55,503,000 in 1953. This figure is still less than in 1951, which was \$80,171,000. In 1952 the figure was \$51,248,000.

Exports of fertilizers and fertilizer materials in 1954 were valued at \$61,911,000 and in 1953 \$42,143,000. Values for 1952 and 1951 were \$42,626,000 and \$50,662,000, respectively.

The value of America's exports of soap and toilet preparations was \$18,894,000 in 1954. This was less than the previous year's figure of \$19,320,000. The values for 1952 and 1951, respectively, were \$18,547,000 and \$19,861,000.

Exports of petroleum and petroleum products in 1954 amounted to \$657,555,000, which was lower than the values for the three previous years. Figures for those years were \$691,944,000 for 1953, \$793,190,000 for 1952, and \$783,007,000 for 1951.

According to the US Department of Commerce, Bureau of the Census, the Foreign Commerce and Navigation of the US, and US records, exports of rubber and rubber manufactures in 1954, amounted to \$147,386,000, compared with \$143,869,000 in 1953. Figures for 1952 and 1951 were \$159,788,000 and \$143,273,000, respectively.

The steady recovery of the West German chemical industry since world war II is indicated by its export figures for the past few years. It was recently reported that West Germany's total chemical exports for 1955 amounted to DM3,400,000,000 an increase of 15 per cent on the previous year, but it is not known whether this is an official figure or an estimate. It is definite, however, that the Federal Republic's exports of inorganic and organic industrial chemicals increased in to DM 855,077,000 from DM 796,789,000 in 1954, an increase of 7.32 per cent. Previous figures were: DM 607,731,000 in 1953, DM 498,863,000 in 1952, and DM 532,919,000 in 1951.

Exports of fertilizers in 1955 amounted to DM 485,184,000, against DM 423,667,000

for the previous year.

The value of West Germany's exports of pharmaceutical products in 1955 was DM 277,880,000 compared with DM 261,696,000 in 1954, DM 219,496,000 for 1953, DM 172,122,000 for 1952, and DM 185,058,000 for 1951.

#### Dyestuffs Down

Exports of coal tar dyestuffs intermediates in 1955 are valued at DM 273,809,000, against DM 286,975,000 for 1954, DM 221,187,000 for 1953, DM 155,771,000 for 1952, and DM 306,092,000 for 1951.

Varnishes, lacquers and putty exported by West Germany in 1955 totalled DM 36,764,000, against DM 27,753,000 in 1954, DM 19,413,000 in 1953, DM. 14,685,000 in 1952, and DM 11,451,000 in 1951.

Soap and detergents exported in 1955 amounted to DM 39,873,000, compared with DM 32,873,00 in 1954, DM 24,861,000 in 1953, DM 16,157,000 in 1952, and DM 16,036,000 in 1951.

West Germany's exports of toilet preparations increased to DM 12,923,000 in 1955.

from DM 10,805,000 in 1954, DM 7,726,000 in 1953, DM 5,912,000 in 1952, and DM 7,862,000 in 1951.

Coal tar products exported by Western Germany in 1955 amounted to DM 86,918,000, compared with DM 81,479,000 in 1954, DM 84,293,000 in 1953, DM 71,527,000 in 1952, and DM 64,692,000 in 1951

#### Protection for Indian Carbide

THE Indian calcium carbide industry, at the recent opening of the inquiry by the Tariff Commission, represented its claim for tariff It has protection and other assistance. been pointed out that handicaps facing the industry such as the cost of raw materials, electric energy, size of operation and freight rates have been responsible for the high cost of production of indigenous calcium carbide. The industry has asked for a protective duty of 120 per cent ad valorem and fixation of the import value of foreign calcium carbide at a minimum of Rs 500 per ton, for evaluating the amount of duty. demand for calcium carbide is placed around 9,250 tons for 1955 by the development wing of the Ministry of Commerce and Industry and is expected to reach 25,000 tons by 1960-61. The commodity was assessed at a rate of 314 per cent ad valorem till the end of February 1955 and the rate was later raised to 50 per cent.

The chairman of the Tariff Commission dwelt on the need for producing a high quality product and on the low level of production by the three existing units in India. While the annual rated capacity of all the units comes to 5,550 tons only a mere 1,605 tons was produced during the first half of the past year. The Commission will examine how far the producers will be able to meet existing demand after implementing their expansion plans. It should be added that this industry has been included in the list of industries to be given high priority during the Second Five Year Plan.

#### Esso Expansion

A record capital expenditure of \$126,600,000 is planned for 1956 by the Esso Standard Oil Co., an associate of the Standard Oil Co. (New Jersey). The largest single item is \$35,500,000 for refinery improvement and expansion. Since world war II, the investment programme has amounted to \$710,000,000.

### The British Industries Fair 1956

The second part of the 1956 BIF opens at Olympia, London, and Castle Bromwich, Birmingham, at 9.30 a.m. on 23 April and closes at 4 p.m. on 4 May. The chemical section, organized by the Association of British Chemical Manufacturers, will be at Olympia. Chemical plant and general factory equipment will be exhibited at Castle Bromwich.

#### The Chemical Section ....

A FEATURE of the display of Albright & Wilson Ltd. will be chemical and electrolytic polishing methods. The object to be polished is immersed in a solution which often contains phosphoric acid. These processes are suitable for articles whose complicated shape prevents them from being polished by any other method.

Kanigen chemical nickel plate, which was introduced to this country last year, will also be shown. This material contains about 8.5 per cent phosphorus and can, by suitable heat treatment, be made quite hard. It is especially suitable for coating components of complicated shape since the plating solution coats all parts of the object in which it comes in contact.

Also on show will be the Proban antiflame finish for cloth. Garments made from treated fabric will shortly be available in the shops.

BX PLASTICS LTD. will be demonstrating Cobex rigid vinyl in sheets, blocks and tubes. In addition to specimens of the actual material as delivered to the customer a range of uses in the chemical industry will be shown. Cobex is claimed to be suitable as a constructional material for corrosion resistant plant such as ducting and trunking, fan casings, tank linings and facings, acid buckets, pickling baskets, component parts of laboratory and drawing office machinery and equipment where corrosive liquids or fumes are encountered.

PLASTICS materials with good chemical resistance will be exhibited on the stand of

BAKELITE LTD. Many of the forms in which Vybak pvc is used in industry will be shown. Heavy gauge flexible Vybak sheeting is useful for tank linings, while in lighter gauges it is used for protective clothing. A further feature of the Vybak display will be its combination with polyester resin. A plating tank will be shown which consists of a glass fibre reinforced polyester shell into which has been bonded a Vybak VR 215 pvc liner. This tank combines rigidity with resistance to chemical attack.

Other items on display will include 'Microballoons', which are tiny spheres of phenolic resin containing nitrogen, used in the oil industry for evaporation control.

CHEMICALS for use in the plastics industry will be one feature of the stand of A. BOAKE, ROBERTS & CO. LTD. (ABRAC). These will include plasticizers, pvc stabilizers (e.g. metallic soaps) and antistatic agents for pvc. Also on show will be chemical intermediates, fine and aromatic chemicals, emulsifying agents and pharmaceutical intermediates.

Chemically pure perfumery isolates were originated, it is claimed, by ABRAC and introduced to the perfumery industry in 1952. Prominence will be given to these chemicals in the ABRAC display of aromatic chemicals.

BOOTS PURE DRUG CO. LTD. are exhibiting a wide range of industrial and fine chemicals, including antibiotics and biological products.

Amongst the chemicals to be exhibited is cortisone, a member of the group of

steroid hormones which has recently created considerable interest in the medical field. Other products of therapeutic interest include heparin, insulin, mepacrine, the sulphonamides and penicillin.

The Company's range of industrial chemicals includes chlorsulphonation derivatives of benzene and toluene, guanidine salts, potassium permanganate and manganese dioxide. MCPA and 2.4.D, the hormone weed killers, will also be shown.

ON the stand of The British Drug Houses LTD, attention will be focused on the range of general laboratory reagents which since 1954 have been labelled with details of minimum assay and the maximum limits allowed of the more significant impurities or equivalent analytical information.

Of particular interest to overseas visitors will be double-seal bottles which BDH has adopted for the security of volatile liquids against loss by evaporation in transit.

NEVER before, it is claimed by BORAX CONSOLIDATED LTD., has amorphous boron of such high purity been available in reasonable quantities. This material, although only in the development stage as yet, will be displayed, together with a range of organic borates. Of the organic borates one or two are solid esters with exceptional resistance to hydrolysis.

DEVELOPMENT chemicals, samples of which are on offer for delivery in small quantities, will be displayed by BRITISH CHROME & CHEMICALS L.TD. These include: potassium tetrachromate, mercurous chromate, chromic chloropentaquodichloride and basic chromium chloride, chromium phosphate, calcium chromate and copper chromate.

British Chrome & Chemicals are manufacturers of chromium and other chemicals and their exhibit will take the form of exhibition type bottles of various products with, as a centrepiece, a large crystal of potassium dichromate.

A NEW product to be shown by THE BRITISH DYNWOOD Co. LTD. is lonogar, a form of agar which is claimed to have important properties. The makers say that it dissolves rapidly in hot water, requires no filtration before use, remains clear in the presence of phosphates, promotes growth, is free from pH shift, and does not retract.

The development of Ionogar followed the discovery that agar is capable of ion exchange.

Other products manufactured by this company include: tanning extracts, tannic and gallic acids, pyrogallol, alkaloids, and cascara.

THE wide interest in Melamine and its numerous applications in quality plastics is reflected in the fact that British Oxygen Chemicals Ltd. sole manufacturers of Melamine in this country, are making a comprehensive display of it.

When Melamine is reacted with formaldehyde, it yields resins which are colourless, hard, water and heat resistant, and which possess excellent electrical properties. This has led to the use of Melamine resins in such varied products as cups and saucers, stoving enamels for cars and refrigerators, decorative laminates for table tops, high duty electrical mouldings and laminates, textile finishes, wet strength paper towels and water resistant adhesives.

Samples of dicyandiamide, polyvinyl acetate emulsions and polyvinyl pyrrolidone will also be exhibited, together with some of the products which are made from them.

The main use of dicyandiamide is in the production of Melamine, but it is also a useful intermediate for other chemicals, including a number of pharmaceutical products.

Polyvinyl acetate emulsions are the basis of the emulsion paints which have recently become so popular. They are also used in adhesives for paper, furniture and bookbinding, for stiffening textiles and in special hard-wearing flooring compositions.

BROTHERTON & Co. LTD., manufacturers of heavy and fine chemicals, will be making a special feature on their stand of sulphur dioxide and derived chemicals, such as hydrosulphite, sulphoxylates, sulphites and bisulphites. Two new chemicals recently introduced into their range will be specially pin-pointed; sodium formaldehyde bisulphite and ammonium thiosulphate.

One side of the Stand will feature their technical advisory service (BROTAS). There will be a member of the Technical Advisory Service present during the whole time of the exhibition.

FINE chemicals will predominate on the stand of Burroughs Wellcome & Co. (The

Wellcome Foundation Ltd.). Burroughs Wellcome is the trading unit for The Wellcome Foundation. All profits made by the company are passed to the Wellcome trustees who are charged with distributing them for 'the advancement of research work bearing upon medicine, surgery, chemistry, physiology, bacteriology, therapeutics, materia medica, pharmacy and allied subjects...' They are also empowered to establish research museums and libraries in any part of the world.

A WIDE range of aromatics will be shown by W. J. Bush & Co. Ltd., including several which are claimed to be new to commercial production in this country. New intermediate products will include o- and p-hydroxy acetophenones, benzanilide, benzhydrol and a-glyceryl guaiacol ether. Among materials in large scale production are vanillin, coumarin, heliotropine, benzophenone, terpineol, methyl cinnamate and linalyl acetate. New precursors for penicillin are now available and will also be shown.

NEWER products and plant used in processing will be shown by CARLESS, CAPEL & LEONARD LTD., manufacturers of petroleum and light coal tar products. A range of close-cut, high boiling petroleum fractions is available. It is believed that many of these have not hitherto been manufactured in this country. They were originally produced to meet the needs of printing ink manufacturers in the preparation of heat set inks and are now being developed for other industries.

The brothers William John Leonard and Charles Hare Leonard introduced petrol as a motor spirit in this country at the end of the last century.

EMPHASIS will be placed on technical service to users of dyestuffs, with special reference to scientific control of dyeing and finishing processes, on the stand of THE CLAYTON DYESTUFFS CO. LTD. The fastness properties of coloured goods will also receive consideration.

A novel feature of the stand will be scientific apparatus and small scale dyeing machines which assist in these projects.

This company manufactures dyestuffs, auxiliary and ancillary products for textile processing and finishing, aniline oil and a wide range of chemical intermediate pro-

ducts, and fat liquors for the leather industry.

PIONEERS in this country of the process for treating coal to produce solid smokeless fuel are COALITE & CHEMICAL PRODUCTS LTD. The smoke forming constituents recovered on processing the coal are the raw material for the chemicals to be displayed by this company.

Featured on the stand will be the growing range of chemicals derived from basic coal chemicals, including chlorinated phenols, catechol and alkyl catechols, and metalorganic compounds.

SPECIALISTS in the techniques of chlorination is a claim made by THE COCKER CHEMICAL CO. LTD., manufacturers of such materials as DDT, chloral hydrate BP, chloral anhydrous, p-chlor-m-xylenol (PCMX), dichlor-m-xylenol, and benzylated cresylic acid (BEXOL). Samples of all these materials will be on show.

Typical end products to which these chemicals have been applied are pesticides, antiseptics, crop control chemicals and rubber products together with certain pharmaceutical materials.

The Cocker Chemical Co. was started in the early thirties by Sir William Cocker, the present managing director.

APART from soaps and detergents, for which they are world famous, JOSEPH CROSFIELD & SONS LTD, manufacture chemicals which have many industrial applications. Many of the company's products incorporate sodium silicate and these will be featured on the stand.

The display is expected to be of particular interest to the packaging board, chemical, paper, textile, engineering and public works, dairy and brewery, packaging, oil, paint, ceramic, food, metal and rubber industries.

FOURTEEN companies will be represented on the stand of The DISTILLERS CO. LTD. Calcium carbide made by BRITISH INDUSTRIAL SOLVENTS will be shown together with a number of new organic solvents, plasticizers and intermediates, and a range of cosmetic chemicals made by the division.

The current expansion programme of BRITISH GEON LTD. in the manufacture of pvc, and of BRITISH HYDROCARBON CHEMICALS LTD. in the production of petroleum

chemicals will be described. Mention will also be made of the new vinyl acetate monomer plant of Hedon Chemicals Ltd., and of the production of surface active agents by Honeywill-Atlas Ltd., both scheduled to start this year.

As a background to these expansions will be the displays of the DCL industrial alcohol division and its associate, The METHYLATING CO. LTD., on whose production the chemical activities of the DCL were originally based, and of COMMERCIAL SOLVENTS (GB) LTD., whose experience in the acetone fermentation process to some extent guided DCL to its present interest in antibiotics.

AMONG those participating on the ABCM's stand will be DURHAM RAW MATERIALS LTD., the sales organization of the Durham Chemicals Group. The exhibit will consist of a show case containing certain of the group's products together with advertising material.

The products offered can be divided into the following categories. (1) Products of DURHAM CHEMICALS LTD.—zinc oxides and metal powders; (2) Products of TYPKE & KING LTD.—general chemicals; (3) Products of NUODEOX LTD.—paint driers and additives, and wood and fabric preservatives; (4) Agency products—selling agencies for the UK are held for the following:—(a) limes produced by the Callow Rock LIME Co. LTD.; (b) Cyclite (cyclized rubber).

FOR the first time FISONS LTD. will be exhibiting as a group at the BIF. The company has been reorganized into five divisions, with a separate company to handle exports.

FISONS LTD. (division 1) specializes in heavy chemicals and fertilizers, and the stand will emphasize the importance of nitrogen, phosphate and potash in healthy plant life. A more topical feature will show how Fisons fertilizers are being used by the British Trans-Antarctic Expedition to grow salad foods in the wastes of Antarctica.

Division 2 is known as FISONS PEST CONTROL LTD., and its share of the stand will illustrate the world wide use of its services and products and will also include two practical examples of the problems of pest control. A second feature will show the diversity of tropical and other plants which are cared for with Fisons Pest Control chemicals.

The uses of hydrazine will be one of the features of the display of WHIFFEN & SONS LTD. (division 3). Applications of this material range from rocket fuels to anti-TB drugs. Ethylene diamine, now being manufactured on a commercial scale for the first time in Great Britain, will also be on show.

Ethical pharmaceuticals are the speciality of BENGERS LTD. (division 4). One of their products, Imferon, is claimed to be the only successful intramuscular iron preparation which has ever been produced.

Stage by stage treatment of skin disorders with dermatological creams will be part of the display of Genatosan Ltd. (division 5). Interchangeable laboratory glassware manufactured by the LOUGHBOROUGH GLASS CO. Ltd., a subsidiary of Genatosan, will also be shown on the stand. A centre piece of the exhibit will be a pair of Oldershaw fractionating columns.

THE stand of the FULLERS' EARTH UNION LTD. will emphasize the versatility of fullers' earth. A wide range of grades will suggest application in the adsorbent, catalytic and ion-exchange fields. Other special earths, such as Fulbond, used for bonding foundry sands, and Fulbent, a suspending and gelling agent, will be featured. Prompt deliveries of British fullers' earth are made to every continent, through an extensive network of agents.

FINE chemicals of high purity are made by THE GENERAL CHEMICAL & PHARMACEUTICAL CO. LTD. Of interest on the stand will be examples of Judactan analytical reagents with actual batch analysis. General Chemical & Pharmaceutical claims to be the only manufacturer of this type of reagent outside the dollar area. Also to be shown is a range of uranium compounds which can now be supplied in any quantity likely to be required.

PENICILLIN, streptomycin, vitamins D<sub>3</sub>, D<sub>3</sub> and B<sub>13</sub>, and cortisone will be exhibited by GLAXO LABORATORIES LTD. In the manufacture of cortisone, which will be on show, Glaxo claim to have developed a unique synthesis based on sisal waste from East Africa. The process is thus based on raw materials from within the sterling area.

Glaxo will also display a model of a molecular structure of vitamin B<sub>10</sub> which

was constructed in the firms laboratories and was put on view at the British Association's meeting at Bristol last year. It was the company's senior biochemist, Dr. E. Lester Smith, and his team who isolated vitamin B<sub>12</sub> in 1948.

AN extensive range of Michrome stains and reagents for microscopy and biology will be exhibited by EDWARD GURR LTD. New stains and reagents will be exhibited including Emexel, Cristalite, Clearmount and Fluormount. Also on show will be pH indicators, bacteriological sugars, tablets for the analysis of drinking water, and photographic and medicinal dyes.

This company manufacture about 2,000 biological stains and reagents and they claim that their delivery service is immediate no matter how large or small the order.

THE principal exhibit of HARDMAN & HOLDEN LTD. will be Sulfan, a stabilized form of gamma sulphur trioxide for which Hardman & Holden have acquired the rights for this country from Allied Chemical & Dye Corp. of the US. Sulfan is claimed to provide an excellent means of sulphonating organic compounds such as alkylates, polyoxyethylated compounds, fatty acids, petroleum fractions, organic acids and esters, etc. for the production of detergents, emulsifying agents, oil additives, intermediates in the drug and dyestuffs fields etc.

A general picture of the activities of the company will also be presented on this stand. Among the Manox products on show will be pigments; stearate, naphthenate, and octoate metallic soaps; the Manoxol range of wetting and dispersing agents; a group of esters; a number of sulphur containing compounds such as thiocyanates, thiourea and thiourea dioxide, the latter being a reducing agent with special properties; and two white silica type fillers for rubber.

FOR the first time three associated Yorkshire companies—HICKSON & WELCH, JOHN W. LETICH & CO. LTD., and THE GARDINOL CHEMICAL CO. LTD.—will be exhibiting together at the BIF.

The diversity of their products will be the theme of their stand. On show will be a large range of organic chemicals, and others to be featured include dyestuffs, pigment and pharmaceutical intermediates, insecticides (technical grades), timber preservatives

and flame retardant preservatives, textile,

Specialities for the textile trade include: Photine optical whitening agents, azoic fast bases, sulphur blacks, basic colours, acid colours, solunaptols, sulphated fatty alcohols, dyeing assistants and textile auxiliaries.

Optical whitening agents and the basic colours, such as Bismarck Brown, and chrysoidine are also used in the paper trade. They are used for the whitening and dyeing of paper respectively.

ANALYTICAL reagents of all types will be shown by Hopkin & Williams Ltd. The range of reagents conforms to specifications laid down in 'Analar Standards for Laboratory Chemicals' published jointly by Hopkin & Williams and British Drug Houses.

Many of the general purpose reagents (GPR) made by Hopkin & Williams now have specifications, formulae and molecular weights printed on the labels. The standard of these chemicals is lower than that of Analar chemicals and they include items previously sold as 'pure', 'recrystallized' and 'redistilled'.

THE stand of IMPERIAL CHEMICAL INDUSTRIES LTD. will feature some of the more recent contributions made to chemical research and production by the company.

Alcian dyestuffs are new dyes which are claimed to give bright, fast shades on cotton and to be an invaluable aid to the textile printer. The first member of the series, Alcian Blue 8G, was developed from Monastral Fast Blue. It is of interest to the dyer, producing fast, brilliant shades on cotton, linen and viscose rayon.

Considerable protection from radiant heat is afforded by suits made of Splendex, an aluminium-coated fabric. The reflectivity of this material is claimed to be as high as 98 per cent and wearers can work close to industrial ovens and furnaces. Other possibilities are the protection of firefighting crews on airports and oilfields.

The properties of silicones are well known today and ICI's stand will show some of the applications of these versatile materials in the aircraft, electrical, rubber, building, leather and textiles industries.

Among recent ICI contributions to the field of pharmaceuticals are Mysoline, used in the treatment of epilepsy, Hibitane, an

antibacterial for medical and veterinary use. Sulmezil, a combined preparation of penicillin and the sulpha drug Sulphamezathine, Siopel, a protective skin cream, and Savlon, a new household antiseptic cream.

Its good mechanical and electrical properties and low friction and non-stick characteristics make Fluon (ptfe) a material with many applications in industry, especially in chemical plant as packing, valve seats, seals etc. Many problems connected with unwanted adhesion can also be solved by using Fluon.

A SELECTION of fine chemicals including metol, hydroquinone and their derivatives will be displayed by Johnsons of Hendon Ltd., together with packed photographic derivatives, litmus (pure) and derivatives, and Magnol chemicals for the Dow Etch process of process engraving using magnesium plates.

A feature of Johnsons' packed chemicals and prepared formulae for photographic use is that they are all now produced in metric sizes for both home and overseas markets. Concentrated developing solutions, for example, are in 100, 250 and 500 ml bottles and 24 litre Winchester quarts.

PHARMACEUTICAL and fine chemicals are manufactured by KAYLENE (CHEMICALS) LTD, and a selection of these materials will be on show including:—magnesium trisilicate, alumninum glycinate, trichloroacetic acid, alumnium isopropoxide, methyl dichloroacetate, alumnium nitrate, stannous sulphate, and organic intermediates.

A WIDE variety of organic and inorganic chemicals will be displayed by KEMBALL, BISHOP & CO. LTD. A total of 20 products is listed including:—citric acid, tartaric acid, ferrous gluconate, lithium benzoate, rubidium salts and kojic acid. The whole range will be on show on the firm's stand.

THE exhibit of LAPORTE CHEMICALS LTD. features the main products of the company. These are hydrogen peroxide and related inorganic percompounds, organic peroxy compounds, barium compounds, and an extensive range of detergents for the laundry and associated industries.

Laporte Chemicals have recently completed the first stage of extensions in hydrogen peroxide production capacity at their Warrington works and a further extension is in progress which will be completed later in the year. These extensions should improve the availability of hydrogen peroxide during the present year. Plans for the erection of a plant for producing hydrogen peroxide by a new non-electrolytic method in the near future have been announced and are now in an advanced state of development. Increasing quantities of hydrogen peroxide are now being transported in bulk by road tankers.

LAPORTE TITANIUM LTD. are illustrating some of the applications of their range of titanium oxide pigments. They will also introduce titanium tetrachloride and a range of organic titanates and offer development samples of these interesting materials.

EXHIBITING for the first time at the BIF are Menley & James Ltd. Their stand will be devoted to displaying the facilities available at their fine chemical plant in Kent, with particular emphasis on the manufacture of the nitrofurans, in which the company has specialized for some years. The nitrofurans have good antibacterial, antiprotozoan and antifungal properties and are already extensively used in human and veterinary medicine.

A SIMPLE display designed to stimulate the interest of overseas buyers will be shown by MIDLAND SILICONES LTD. Typical applications of silicones selected from the experience of many industries will be shown. These are intended to demonstrate how this group of chemicals has been exploited in widely differing fields. The majority of these applications are naturally outside the boundaries of the chemical industry itself.

Silicone fluids, resins, rubbers and greases are finding increasing overseas markets in industries ranging from the electrical to the aeronautical, and from precision instrument production to steel production.

QUATERNARY ammonium compounds will be a feature of the showcase of MILTON INDUSTRIAL CHEMICALS (LONDON) LTD. Indication will be given of the uses these products have in industry to-day. It is claimed that certain of these chemicals are unobtainable elsewhere in this country. The manufacture of a selected type of quaternary will be illustrated diagrammatically.

THE stand of Monsanto Chemicals Ltd. in this year's BIF will feature a prestige display illustrating the contribution made by the company's products to the industries of the world. No particular products or groups of products will be highlighted.

THE production of 'distilled' quality water using both portable and fixed Deminrolit water dimineralizing plant will be one of the exhibits of the Permutit Co. Ltd. The portable units will be in working order. The mixed bed Deminrolit plant for the production of 'multiple distilled' quality water will also be shown in action. This type of plant embodies a single column of mixed cation and anion exchange resins, and is claimed to produce water containing less than one ppm of total dissolved solids and having an electrical conductivity of less than 0.5 gemmhos.

The largest single application of ion exchange outside the field of water treatment is the extraction of uranium from low grade ores. Until recently this process was on the secret list. Many large Permutit ion exchange uranium extractors are now in operation in South Africa and Australia, and others are shortly to be put to work in Canada, Rhodesia and elsewhere.

The display will also include a comprehensive range of the ion exchange resins manufactured by Permutit.

EMPHASIS on the PETROCHEMICALS LTD. stand will be towards ethylene and propylene derivatives—glycols, amines and glycol ethers (Oxitols).

The display, featuring a huge model product tank symbolically linked to a dramatic mural, will relate each product to the industry or industries in which it is most widely used.

A check through the list of industries covered—agriculture, aircraft, automobile, paper, pharmaceutical, cosmetic, plastics, resins, printing, surface coatings, textiles—will show that these comparatively new chemicals from petroleum are already of importance throughout industry.

WHAT is described as a fairly complete range of ultra rubber accelerators based on piperidine, dimethylamine, diethylamine, dibutylamine and ethylene diamine will oe shown by ROBINSON BROTHERS LTD. Fungicide chemicals such as Ferbam, Ziram, Sineb and Thiram will also be on show.

It has been found, say the makers, that it is not generally known that this range of products is available in Great Britain. More widely known sources are Germany, Belgium and the US.

It is claimed that prompt shipment to consumers is maintained, although shipping space is sometimes difficult to reserve as most of these products are classed as hazardous.

FOUR main groups of chemicals from petroleum and some of the uses to which they are put will form the theme of the SHELL CHEMICAL Co.'s stand. These groups are detergents, resins, general chemicals (ketones, alcohols, extracts etc.) and agricultural chemicals.

The basis of the display for each group will be one or more giant representations of laboratory vessels each containing its own miniature exhibition covering the industries served.

From the many Shell chemical products a selection has been made for this occasion, including ketones, alcohols, sulphur, naphthenic acids, Dutrex extracts, Epikote resins, a wide range of anionic and non-ionic detergents (Teepol, Lensex etc.), insecticides and weedkillers.

CATALYSTS which are claimed to have been proved on an industrial scale will be shown by Peter Spence & Sons Ltd. These catalysts are in extensive use throughout the world. Of particular interest are the various types of cobalt and molybdenum oxides on alumina catalysts which are used in the desulphurization of petroleum products and in the refining of benzole.

Organic titanium compounds are also produced by this company. Butyl titanate is used in the preparation of heat and corrosion resisting paints, in polishes, as a catalyst in the low temperature curing of silicone resins, as a source of pure TiO, and in textile waterproofing compositions.

THE underlying theme of the exhibit of JOHN & E. STURGE LTD. will be to show the many and varied uses to which fine chemicals can be put and how they take their place in the production of a wide range of consumer goods.

The centre exhibit will be a 'plastic car'. Sturge calcium carbonate is used as an

extender for the polyester resin used in construction of the reinforced plastic body. Other uses of precipitated calcium carbonate are in rubber, dentrifices, paints and inks, pharmaceutical products, etc.

Citric acid is produced from the fermenta-

tion of the agricultural waste material, molasses, by the mould Aspergillus niger. Sturge claim that in 1930 they were the first UK manufacturers to produce chemicals on the industrial scale by means of a mould fermentation process.

#### Chemical Plant & Equipment . . . .

CASTINGS in 16 of the Paralloy range of stainless steels will be featured by APV-PARAMOUNT LTD. They will include general purpose and special purpose corrosion resistant steels, free machining varieties and heat resistant castings. Exhibits will carry the nominal alloy specification and type uses will be indicated.

The company will also illustrate some of its casting services, including the new CO<sub>2</sub> moulding technique, shell moulding and

radiographic examination.

BESIDES displaying their full range of plastics for industry, BAKELITE LTD. will exhibit for the first time their polythene and syntactic foams, and examples of 'dipping', a new technique using polyester resins for protection against humidity and corrosion as well as for insulation purposes.

Syntactic foams are low density structural materials which can be used in hot or cold thermal insulation, and are produced by bonding small hollow spheres made of phenolic resin with other type resins. Dipping' is a process of applying a protective seal on electronic components against changing atmospheric conditions or as an electrical insulant.

Also featured on the stand will be the use of polythene as a cable dielectric, and the cellular-type polythene which has a lower dielectric constant. This cellular polythene will be shown in use on TV lead-

in aerials.

AN ECONOMICAL powder-type hand cleanser, which is claimed to combine the effectiveness of a heavy duty cleanser with the mildness of a 'baby' soap, will be demonstrated on the Boraxo stand by BORAX CONSOLIDATED. Known as Boraxo (Braxo), the cleanser removes grease, grime and chemicals from workers' hands, without un-

due removal of natural fats. It is soluble and contains no harsh abrasives or organic solvents. The action necessary to remove dirt, or to penetrate oily films, is provided by grains of borax which dissolve during washing.

Also demonstrated will be the standard vitreous-enamelled steel dispenser, designed for use with Boraxo, which can be fixed on a wall above a wash-basin or specially fitted to circular wash-fountains. The dispenser embodies a metering device which restricts the amount delivered on operation of the plunger and ensures economy in use.

FOUR subsidiaries will share the stand of THE CHEMICAL & INSULATING Co., of Darlington, who will exhibit magnesia thermal insulating products in the form of Darlington 85 per cent magnesia sections, slabs and plastics used for insulating power stations, oil refineries, and for direct application to surfaces up to 650°F. For temperatures above this the company will show Meta-Dextramite and Dextramite.

A subsidiary company, The British Refrasil Co. Ltd., manufacturers of a pure silica fibre resistant to temperatures up to 1,000°C, and electrically resistant and chemically inert, will display a selection of samples. The Darlington Insulation Co., who carried out the insulation of the Calder Hall atomic station, will display a model

of the reactor vessel.

INCLUDED in the range of Compton products to be exhibited by DAWSON, McDonald & DAWSON LTD., of Ashbourne, will be compressors, spraying equipment, plastics mouldings, and the airless and A2 water spray guns. Compton compressors are used in a wide field for such purposes as instrument operation, pressurizing and dispensing liquids, spray painting, and the fluidiza-

tion of dry powders as well as supplying air to positive-pressure protective helmets.

AS USUAL the exhibits on the stand of DSIR will demonstrate the application of research to the development of industrial products. Among exhibits will be examples in the fabrication of titanium, and the sodium process, a process which has cut the cost of titanium powder. Many of the problems in fabricating titanium which have been overcome by the research of a number of private companies will be demonstrated. A new casting method for titanium will be displayed by WILLIAM JESSOP & CO. LTD., of Sheffield.

Other exhibits will display the uses of niobium tube and its sheet production, steel casting, hardened anodized surfaces for aluminium, plastics for metal forming tools, high pressure flexible pipes, laboratory glassware and the dry coating of pills.

IN the laboratory glassware section lead and antimony free glassware, low actinic amber glassware, and unbreakable, leak-proof stoppers will be displayed by H. J. ELLIOT LTD., of Treforest, Wales. A process which gives aluminium a hard, wear-resisting surface will be demonstrated by HARD ALUMINIUM SURFACES LTD., of Glasgow.

AMONG exhibits on the stand of FAWCETT-FINNEY LTD., the company recently formed to handle the sales services of FAWCETT PRESTON & CO. LTD., and FINNEY PRESSES LTD., will be the Davis-Standard extruding machine for thermoplastics. This machine has sectional type cast cylinders with a corrosion resistant removable liner. Its capacity, using a typical pvc compound, is 220 pounds per hour; polythene, 160 pounds per hour.

INTRODUCED to this country at the 1954 BIF, the Powermaster Packaged Automatic Oil Fired Boiler will be shown by GWB FURNACES LTD., who recently opened a new factory to make these boilers. Two models will be on view, Model 100 which has a maximum of 3,450 pounds of steam per hour, and Model 350 which has a maximum capacity of 12,075 pounds of steam per hour.

Smoke-free in operation, Powermaster boilers have a guaranteed efficiency of over 80 per cent when working on 20 per cent

up to 100 per cent capacity as the result of the patented Vortiflow burner and the modulating burner control system in which the fuel/air ratios are held to suit the demands made. The boilers are automatically controlled and need only up to one-half the space required by conventional boilers of equivalent capacities.

A MODEL of a 'floating waterworks' made by Marston Excelsion Ltd, will be a feature of three ICI displays at Castle Bromwich. The company's Metals Division will feature examples of applications of titanium, while the Plastics Division includes Pluon, the new plastic with the non-stick characteristics, among its exhibits.

A display of ICI non-ferrous metal products—copper, brass and aluminium sheet, strip, rod, tube, wire and plate—will be supplemented on the Metals Division stand by exhibits showing specific applications in the petroleum, building, transport and other industries, with emphasis on special tube products including Integron integral finned tube.

'Nylon for brushes' will be a theme of the PLASTICS DIVISION stand. The range will also include materials for the production of engineering components which are tough, abrasion-resistant, silent running and selflubricating; textile pickers in which very high shock resistance is required; mouldings such as hyperdermic syringes which are required to undergo constant sterilization; and a wide variety of domestic mouldings which are outstanding for their strength and toughness.

ALL grades and types of Permali, Permaglass and Hy-dulignum will be featured in a variety of applications for general engineering, chemical and electrical uses by PREMALI LTD., whose overall theme will be 'laminates for industry'.

Among chemical exhibits will be the Mitchell hot air drying stove which will demonstrate the advantages of Permali moulded plastics drying trays for resistance to chemicals and heat, Permali chemical-resisting filter press plates in varying sizes, and chemical-resisting components including an impeller, filter gate, and taps.

A WIDE range of fluid control equipment will be exhibited by SAUNDERS VALVE Co., of Cwmbran, with prominence given to the HSB (based on high styrene butadiene) and

Vulcathene plastics component valves in sizes up to two inches. The HSB is chemically resistant, and has a maximum working temperature limit of 60°C. Among pump exhibits will be the latest version of the Safran Multistage in which high pressure glands are eliminated—the only gland being that at the high pressure eye of the first stage impeller which is sealed by the pressure of liquid from the impeller.

FEATURED on the stand of John & E. Sturge Ltd. of Birmingham, will be a glass-fibre reinforced plastics car body in which a grade of precipitated calcium carbonate produced by the company was used as an extender for the polyester resin. It will illustrate the theme of the display, which is to show the varied uses for the range of Sturge fine chemicals.

Other exhibits will be citric acid produced by the industrial mould fermentation process, and a range of pure alkaline earth compounds, calcium and barium carbonates and monohydrogen orthophosphates.

#### To Show Polarographs

POLAROGRAPHY will be one of the features of the Evershed & Vignoles stand at the British Industries Fair, Olympia. The Tinsley Mark 15 polarograph will be on show together with the Polaragraph Minor, a less expensive recording instrument claimed to be the only one of its type to incorporate a derivative circuit.

#### Q & Q's Largest Unit

THE largest laboratory-glassware unit ever made by Quickfit & Quartz Ltd.—a 20 ft. long Craig counter-current liquid/liquid extractor—will be the centrepiece of the firm's stand at the British Industries Fair, Olympia.

This fully automatic extractor, comprising 200 glass tubes, is more efficient than its smaller 50 tube counterpart. One of these large-scale extractors was recently exported to Norway.

Also occupying a prominent position on the stand will be a circulatory cyclone evaporator, which is being used by a Slough firm in the preparation of chemicals worth thousands of pounds.

Among other exhibits will be: a fourpurpose assembly which can function either as a vacuum drying pistol, a vapour bath, a jacketed evaporating dish or evaporating flask; the Q & Q range of sintered glass filters; a Kjeldahl distillation assembly and Markham still; a rotary film evaporator; a range of chromatographic columns together with a Kawerau bridge unit and a chromatographic coil; a large-scale vacuum distillation assembly, based on the B34 conical ioint: a semi-micro molecular still and a range of Soxhlet extractors of a vastly improved design which are said to reduce to the absolute minimum the danger of erratic syphoning—a common fault in traditional designs.



Part of the plating shop at the Stafford works of the English Electric Co. Ltd., showing Cobex rigid vinyl, made by BX Plastics Ltd., used for corrosion resistant ducting

## Marketing New Discoveries

#### National Research Development Corporation's Report

THE activities of the National Research Development Corporation during the year ended 30 June 1955 are described in its sixth annual report, just published by HM Stationery Office (1s). The report is divided into sections dealing with development projects referred to in previous reports, new development projects, established projects, and other work.

Among the projects started in previous years was the production of hecogenin from sisal. According to the report, this enterprise has been transferred to firms 'now engaged in the industry concerned' on satisfactory commercial terms. Royalties derived from the sale of hecogenin are expected to be a useful source of revenue to the corporation in the future. Cortisone is being commercially produced from the hecogenin now available.

Another project referred to in previous reports was the acetylene synthesis project at Imperial College. A leading firm of chemical engineering consultants was commissioned to study and report on the prospects of this process and reported in favour of the corporation's continuing to support it. The report states that the corporation will therefore continue to do so.

#### New Strains Synthesized

During the year under review the corporation arranged to finance research and development work on the application of a technique devised by Dr. G. Pontecorvo, F.R.S., and Dr. J. A. Roper of the Department of Genetics of Glasgow University whereby it is possible to synthesis new strains of non-sexually reproducing microorganisms. The technique involves the crossing of strains containing some preferred genetically-controlled properties, and results in the production of new strains which combine the desired properties of both parent strains. The application of this technique is hoped to be of considerable value to industries in the microbiological field, including antibiotics.

Rights in several patent applications of Professor R. L. Wain's weedkillers have been assigned to the corporation by the Agricultural Research Council. Professor Wain, of Wye College, while carrying out an academic study with the help of the Agricultural Research Council upon the mode of action of so-called 'hormone' weedkillers, discovered that certain phenoxybutyric acid derivatives possess exceptional properties. The compounds are powerful herbicides and yet are relatively non-toxic, for example, to clover, a valuable crop hitherto sensitive to so-called hormone weedkillers. The report states that one UK firm marketed a weedkiller preparation of this type under licence on an experimental scale during 1955, and there are prospects that such substances will be marketed on a much larger scale in 1956. The possible large-scale overseas applications of the substances are being actively investigated in collaboration with various official bodies through liaison with the Agricultural Research Council.

Among the public inventions which have not required expenditure by the corporation and are being exploited by industry is the commercial modification of stoving enamel originally conceived for the internal protection of weapons containing chemical warfare substances. It is resistant to water and acids and contains phenol formaldehyde and ammonia or an organic amine. The invention resulted from the work of Mr. D. H. Finn, F.R.I.C., and Mr. S. R. Finn of the Chemical Defence Experimental Establishment, Ministry of Supply. A UK firm is making and selling the product under licence on a considerable scale for commercial use,

#### To Double Phosphates Output

WESTVACO, the mineral products division of the Food & Chemical Corp. of the US, and the first company to operate a fully-integrated phosphate production plant in the US which they introduced in 1948, is to double its output of sodium and potassium phosphates at its Newark, California, plant.

Westvaco, which operates Western America's largest electric phosphate producing plant at Pocatello, Idaho, also operates plants in New Jersey where elemental phosphorus is converted to phosphoric acid.

#### Chemical Department

To Market Esso Products

WITH the recently announced expansion of facilities at the Esso Refinery, Fawley, to produce large volumes of raw materials suitable for chemical synthesis, Esso Petroleum Company has established a chemical department specifically to market these products to the United Kingdom

chemical industry.

Manager of the new department is Mr. T. C. G. Thorpe, formerly manager of the wholesale department. Mr. A. A. Appleton, formerly assistant technical superintendent at the Esso Refinery has been appointed assistant manager. Dr. E. J. Boorman, formerly assistant manager and chief chemist, technical sales department, succeeds Mr. Thorpe as manager, wholesale depart-These appointments became effecment. tive on 1 February 1956.

#### Served With Petroleum Board

Mr. T. C. G. Thorpe was born in Glasgow and educated at Churchers College and London University. Joining the company as a chemist in 1930, he carried out these duties till the outbreak of war, when he was seconded to the Petroleum Board. In 1947 he was appointed assistant manager of the technical sales department, becoming manager the following year. Prior to his present appointment, he held successively the following posts: manager, industrial lubricants department (1950); manager, retail sales department (1953); and manager, wholesale department (1955).

Mr. A. A. Appleton, born at Manchester in 1922, was educated at the Central High School, Manchester and Manchester University, where he graduated with B.Sc. Tech. (Chemical Engineering) and B.A. (Com.).

Before joining Esso Petroleum Company 1952, he had been for nine years with ICI in the research experimental plant and the overseas intelligence department of the

Dyestuffs Division.

Dr. E. J. Boorman was born in 1911 at Chatham and educated at the Mathematical School, Rochester and London University (Imperial College). After graduating he spent two years doing research work on the staff of the Imperial College, before joining the Government laboratory where he was from 1937 to 1946, engaged in research into petroleum products.

In 1947 he joined Esso Development

Company at the Esso European laboratories near Abingdon, where he was in charge of the analytical and inspection laboratories.

In 1948 he was transferred to the Esso Petroleum Company's technical sales department in London as chief chemist and in 1954 was appointed assistant manager and chief chemist.

#### Ethylene Oxide Trend

THE Scientific Design Company Inc. (SD) has been awarded the contract to design and engineer the new ethylene oxide and ethylene glycol plant to be built by General Aniline & Film Corp. at their dyestuff and chemical division plant in Linden, New Jersey, at a cost of \$8,000,000.

A question arising from this new GAF plant, the sixth major project since 1953 to use the SD process, is how will it affect the future of the older chlorohydrin pro-Until 1953 the greater part of ethylene oxide was supplied by this technique. To-day, more than half is furnished by direct oxidation.

The SD process first went into commercial operation for Naphtachimie, the French

chemical concern.

The direct oxidation method is a one-step process whose principal advantage is that it eliminates chlorine from the reaction, thus removing the corrosion and purity problems associated with chlorine. The popularity of direct oxidation has also been increased by the rising price of chlorine and by the greater availability of high-purity. low-cost ethylene. (The chlorohydrin method needs about 2.1 pounds of chlorine per pound of oxide. The direct oxidation method uses none.)

#### ICI Wage Arbitration

The dispute over the wages of ICI's engineers and craftsmen is to be referred to voluntary arbitration by a Board of Arbitration on the understanding that any award made by the board will date from 23 January 1956. The board will consist of an independent chairman appointed by the Ministry of Labour and two assessors, one nominated by the company and one by the trade unions. The trade union representatives have agreed to recommend to their executive a resumption of normal work. Recently the men rejected a 31d an hour offer and banned overtime at some works.



PLASTICS FOR CORROSION-RESISTANT APPLI-CATIONS. By R. B. Seymour & R. H. Reinhold Publishing Corporation, New York; Chapman & Hall Ltd., London. 1955. Pp. 423. 60s.

Probably more advice has been proffered to the chemical engineer on the subject of protecting chemical plants from corrosion with the aid of plastic materials than on any other aspect of his activities. Here at last is a book which, while remaining of reasonable size and price, condenses and codifies all this heterogeneous mass of information, scattered as it is throughout journals, supplements, manufacturers' pamphlets, reviews, abstracts and patents. To this the authors have been able to add the fruits of their own experience in the American chemical industry and the result is a highly satisfactory guide to the selection and utilization of plastics for the construction of chemical plant.

Very little attention is paid to the theoretical side, either of the chemical degradation of plastics materials, or the structure of the materials themselves. Instead the authors have concentrated upon providing as many facts significant from a practical point of view as possible, and these are arranged most conveniently in the form of tables of physical constants, sizes and properties of commercially available fabricated shapes and comparative degrees of resistance to chemical attack.

The scope of the book has not been too rigidly defined so that materials akin to or used in conjunction with plastics are also described. Thus one may find references to sulphur cements, graphite pipework and asphalt. The techniques of fabrication of chemical plant such as the hot-gas welding of thermoplastic materials and the building and acid-proofing of brick or cement tanks is discussed in some detail with the aid of explanatory diagrams. There are also chap- course, be aware of the increasing impor-

ters upon the testing of plastics, the use of industrial adhesives and the jointing cements for water supply pipes and sewers.-J. R. MAJER.

DIE CHEMISCHE INDUSTRIE DER WELT. Alfons Metzner. Band I Europa, Band II Ubersee, Econ Verlag GmbH, Dus-1955. Pp. 671 & Pp. 463. seldorf. DM 38.

In this chemical age innumerable nonchemists find themselves confronted with the task to get acquainted with hundreds of chemicals and their manufacturers all over Bankers, investment brokers, merchants, shipping agents, executives of all industries, who have forgotten all their chemistry since school days, must all of a sudden enter the strange world of chemical industry, and like Dante in the Inferno, they are looking anxiously for a benevolent guide to explain to them the chemical stage and its myriads of actors and decors.

While the national chemical industry of most countries has, of course, been described by many authors in numerous articles written for their own respective countries, no book has existed until now which deals with the whole world's chemical industry. A. Metzner has attempted to fill this gap and produced for the Econ Verlag GmbH of Dusseldorf a two volume text-book entitled 'Die Chemische Industrie der Welt'.

Dr. Metzner divides the world's chemical industries into those of Europe with which he deals in the 670 pages of his first volume and those of the non-European countries which are covered by the 420 pages of his second volume. As his German language book is, undoubtedly, addressed in the first place to his own countrymen, this emphasis on the Old World appears logical enough.

The English reader, however, will, of

tance of the US and Canada as producers of chemicals as well as markets for European chemical products and Dr. Metzner's treatment of these two countries may appear to him less thorough than his studies of the European manufacturing centres. Dr. Metzner has benefited from his long years of experience as editor of one of the most important chemical periodicals in West Germany, so that his volume is quite complete as far as his description of major manufacturing facilities of Europe is concerned.

The chapter on West Germany is doubly welcome because of the quite perplex structure which has resulted from the break-up of the pre-war giant of the German chemical industry, IG-Farben. Dr. Metzner also lists with some detail the minufacturing plants of Eastern Germany which are playing an increasing part in supplying both European and overseas markets with cheap basic chemicals. There are chapters on the other satellite countries which are so often neglected.

Regarding better known chemical concerns described in detail, the history of ICI in this country, charts covering St. Gobain in France, Holland's Algemene Kunstzijde Unie NV and the details of Montecatini in Italy are quite revealing. Dr. Metzner even managed to include some data on Soviet Russia which he visited a short while ago as a member of Chancellor Adenauer's party which negotiated diplomatic relations between Germany and the USSR. Unfortunately he did not get to see much of the Soviet Russian chemical industry, and his data remains scanty and not particularly revealing on this subject.

The second volume omits a few rather important countries, such as Indonesia, Ceylon, Indochina and Persia in Asia, the Central American Republics, the Philippine Islands, and the Dominion of New Zealand. The US data are up to date, but too much emphasis is placed on those firms whose publications are easily available (for instance the soap manufacturers Procter & Gamble), while other chemically more important firms are covered only by a few lines (for instance Atlas Powder, Roehm & Haas). The final indices are not very complete for speedy reference and the author entirely neglects to mention any of his source materials.

Did Dr. Metzner write the 'Unwritten Book', to which he refers in his introduction? Undoubtedly, his painstaking collection of names and facts will help a great number of people to get a superficial acquaintance with his subject, which may be all they may require in their search for general information material. The more serious company executive, however, will probably continue to build up his own collection of references and data to obtain more precise information on the specific picture of, for instance, world capacity for the manufacture of some particular chemicals. The chemist in turn will probably find the chapters with their snappy journalistic headings rather poorly organised and not at all

uniform in their completeness.

Firms with library budgets, where the purchase of another £3 10s treatise does not matter one way or the other, may be well advised to add Dr. Metzner's book to their reference section. The more critical reader with a smaller budget may, however, hesitate and wonder whether this volume will not be out of date too soon to warrant the Dr. Metzner, indeed, expense involved. knows a great deal about the world's chemical industry and ought to be congratulated on his effort even though there is still room for another attempt to write a more complete treatise on the overall picture of the world's chemical industry. For the time being Dr. Metzner will help many, who had no general reference book of this kind available at all.—A. E. LAURENCE.

#### Plant Engineers' Meeting

THE plant engineer's contribution to progress is the theme of the ninth annual conference of the Incorporated Plant Engineers to be held at the Hotel Majestic, Harrogate, from 16 to 18 May. Dr. J. E. Faraday, B.Sc., Ph.D., deputy works manager of the Pilkington-Sullivan Works, General Chemicals Division, ICI, will deliver the principal paper, entitled 'The Plant Engineer and Work Study.'

The conference programme also provides for four discussion groups on subjects widely separated in nature but of interest and value to all sections of industry at the higher

executive level.

On the morning of 17 May, the new president, Mr. L. C. J. Bayley, A.M.Inst.Pet., will be installed.

In the evening the conference dinner will have as the principal speaker Mr. C. M. Vignoles, O.B.E., managing director, Shell-Mex & BP Ltd.

## HOME

#### Distillation Unit En-Route

A 30-ft. high distillation unit, supplied by QVF Ltd., of Stone, Staffs, is en-route for the Chemex Exhibition at Melbourne in May. The unit, which has a 45 square feet heating surface, is the first piece of apparatus to be exhibited in Australia by QVF.

#### Sharples Expanding

Sharples Centrifuges are building a new head office, a pilot plant and a development laboratory and factory on the York Town Trading Estate, Camberley, Surrey. The facilities are intended to handle the expanding overseas market for Sharples centrifuges as well as the increasing range of machines being developed.

Writ Against Monsanto
A writ against Monsanto Chemicals Ltd. has been issued by eight people who are seeking an injunction to restrain the company from polluting a stretch of the River Dee downstream from the firm's works af Ruabon. They are also claiming damages for alleged pollution. The plaintiffs own the salmon fishing rights in that stretch of the river.

#### The Dexion Story

The premiere of 'The Dexion Story', a film produced by the 'Industrial Observer' for Dexion Ltd., was held on 5 April at the Odeon, Swiss Cottage, London. The film, which runs for about 25 minutes, illustrates the many uses for Dexion and shows the savings that can be made in time, labour and money when Dexion is used by unskilled labour for making racks, benches, conveyors, trolleys and other equipment.

#### Drawback of Import Duty

The Board of Trade give notice that they are considering an application for drawback of import duty under Section 9 of the Finance Act, 1932 in respect of polycaproamide imported in the form of powder or granules, and the export of cable, sheathed with polycaproamide, and containing four copper wires and three steel wires, being wires of a diameter not less than 0.011 in. nor more than 0.012 in. Representations which interested parties wish to make should be addressed in writing to the Board of Trade, Tariff Division, Horse Guards Avenue, London SW1, not later than 28 April.

#### Leeds University's New Lectureships

As part of Leeds University's development programme, by which it is planned to treble the pre-war number of technological and scientific students, six new lectureships will be instituted on 1 October. They are in physics, mechanical engineering, mining (surveying), chemical engineering, textile industries and leather industries. An assistant lectureship in textile industries will also be instituted.

#### Agriculture Group Meeting

The annual general meeting of the Agriculture Group of the Society of Chemical Industry will be held at The Chemical Society, Burlington House, Piccadilly, London W1, on 24 April at 5.30 p.m. of the agenda will be the election of the committee for 1956-57.

Technologists & Plastics
Professor Sir Eric Rideal, M.B.E., M.A., Ph.D., D.Sc., F.R.S., chairman, Advisory Council to the Ministry of Supply, will address the Plastics Institute on 'Technologists and the Future of Plastics' at 6.30 p.m. in 16 April. His theme will cover the problem of training.

Titanium Dioxide Duty Exemption
The Treasury has made the Import Duties (Exemptions) (No. 2) Order, 1956, which continues for a further period of six months, ending on 26 September 1956, the exemption of titanium dioxide from duty chargeable under the Import Duties Act. 1932. This comes into operation as from 27 March, and has been published as Statutory Instruments 1956, No. 389, obtainable from HM Stationery Office, price 2d.

#### **Exemptions From KID**

The Treasury have made an Order under Section 10(5) of the Finance Act, 1926, exempting the following items from Key Industry Duty for the period beginning 9 April 1956 and ending 18 August 1956:synthetic organic chemicals, analytical reagents, other fine chemicals and chemicals manufactured by fermentation processes inmono-tertButylamine; 3:7-Dimethyl-n-octaldehyde (a decaldehyde); ethylene glycol monobutyl ether (an ethylene glycol ether); isoPhthalic acid; sodium 3:5diacetamido-2:4:6-tri-iodobenzoate; and trin-butyl acetylcitrate (a butyl esters).

## · OVERSEAS

Nylon Tyre Sales Doubled

A survey made by E. I. Du Pont de Nemours & Co., of Wilmington, Delaware, showed that retail sales of nylon tyres in the US have more than doubled in the last year, and have quadrupled in just two years.

Singapore Buys SA Asphalt

The Government of Singapore has bought 8,800 tons of South African manufactured asphalt valued at £135,000. The asphalt, which has been prepared at the oil refinery at Wentworth, Durban, will be transported in drums.

French Customs Duties

The French Journal Officiel of 29 January announced that during the period ending 31 December 1956, up to 18,000 metric tons of unrefined whale oils and fats and hydrogenated whale oils and fats, whether or not refined, but not prepared and intended for the manufacture of edible fats (tariff items 15-04 Ex C and 15-12A) will be allowed into France free of customs duties.

Oil From Coal Investigations

Preliminary investigations are being made into the possibilities of producing oil from coal from the Rhodesia-Nyasaland Federation's Lubimbi coalfield, near Wankie, and of setting up a large-scale petrol producing and allied chemical industry there. Rhodesian Anglo American Ltd., and Wankie Colliery Ltd., equal shareholders in Lubimbi Coal Areas Ltd., are behind the project, which has been approved by the Southern Rhodesia Government.

#### Jamaican Bitumen Plant

The Shell Company (West Indies) Ltd., has applied for pioneer status for its bitumen plant at its Rockfort, Jamaica, installation. The plant is designed to receive and store hot bitumen, which will be brought to Jamaica in special tankers equipped to keep it liquid by heating to a high temperature. It will be kept in liquid form at the plant during storage and manufacturing into road oils and emulsions and may be delivered in bulk in liquid form. The bitumen plant is expected to encourage the establishment of various secondary industries dependent on reasonably priced bitumen as an essential raw material.

To Report on Fertilizer Project

The Government of Brunei in Borneo has commissioned L. H. Manderstam & Partners Ltd. (Consulting Engineers) of London to report on the proposed inauguration of a fertilizer industry based on the utilization of the natural gases available in Brunei.

Staatsmijnen to Produce Polythene

The Dutch company Staatsmijnen in Limburg (The Netherlands State Coal Mines), have decided to produce polythene by the Ziegler patents for which they have bought the licences for the entire Benelux countries. For this purpose a new factory with a capacity of 5,000 tons per annum is being constructed at Beek, Holland, which will be completed towards the end of 1957. Hitherto, Holland has imported polythene mainly from the US and the UK.

Maple Leaf Factory

The Maple Leaf Cement Factory built by the Pakistan Industrial Development Corp. with the financial aid of Canada under the Colombo Plan went into production on 19 March. The factory's capacity of 100,000 tons of cement a year will be doubled shortly.

Indian Dyestuffs Laboratory

A new research laboratory devoted to dyestuffs technology was declared open last month at the department of chemical technology, University of Bombay, by Dr. J. C. Ghosh, member, Planning Commission of the Government of India. The laboratory, which owes its origin to two companies dealing in colours, will offer wide scope for research work in the indigeneous manufacture of dyestuffs.

US Company Gets Australian Option

Two Australian companies engaged in exploiting beach sands in Queensland for rutile have granted an option on their property to the Standard Ore & Alloys Corp. of New York. The companies, Rye Park Scheelite NL and Tungsten Consolidated Ltd., acquired the property at Teewantin, about 100 miles north of Brisbane. Boring showed about 41,000 tons of rutile, and about 2,500 tons of monazite. The agreement gives the US company the right to purchase the property outright for £A200,000, or a half-interest for £A100,000.

## · PERSONAL

SIR HARRY JEPHCOTT, Kt., M.Sc., F.P.S., the chairman of Glaxo Laboratories, has joined the board of the Murphy Chemical Co. MR. F. J. SAMWELL, the secretary of the company, and MR. G. L. HEY, have been been appointed assistant managing directors.

Now that work on the Levington Research Station on the 400-acre site at Levington, Suffolk, is nearing completion, Fisons Ltd, have announced the following staff appointments: - Dr. J. A. STORROW, M.Sc.(Tech.), Ph.D., D.Sc., M.I.Chem.E., lately Deputy Director of Research, Fisons Limited, and formerly senior lecturer in chemical engineering, University of Manchester, to be director of the Levington Research Station; Dr. J. G. HUNTER, B.Sc., Ph.D., F.R.I.C., to be head of soil science department; and DR. T. K. HANSON, B.A., B.Sc., Ph.D., Dip.Chem.Eng.(Lond.), to be the head of the chemistry department. DR. Hunter was formerly officer in charge of the Tobacco Research Station in Rhodesia; Dr. Hanson, formerly research manager of the Esso Development Co.

SIR CHRISTOPHER HINTON, managing director of the industrial group of the UK Atomic Energy Authority, is to leave Britain on 12 May for a two weeks' tour of Japan at the invitation of the Minister in charge of nuclear energy in Japan. During his visit, Sir Christopher will give three and perhaps four lectures on atomic power to specially invited audiences.

SIR BEN LOCKSPEISER, K.C.B., M.A., D.Sc., M.I.Mech.E., F.R.Ae.S., F.R.S., who recently retired as secretary of the DSIR, has joined the board of Tube Investments Ltd. and has been appointed scientific adviser to the Tube Investments Group, He has also been elected a director of the Staveley Coal & Iron Co, Ltd. It has since been announced that Sir Ben has accepted an invitation to act as consultant to Ferranti, the electrical engineers.

The appointment is announced of Mr. H. J. TAYLOR as manager of Johnson, Matthey & Co. Ltd.'s Hadyn Park Works at Shepherds Bush, London. He succeeds Mr. A. Godden. Mr. Taylor joined the company at the Hadyn Park Works in 1935 and in 1945 took charge of the rolling mills. He

was promoted assistant manager of the works in 1953. Mr. Godden will devote himself to his duties as the company's general production manager.

Price's (Bromborough) Ltd, manufacturers of stearines, oleines, textile oils, fatty acids and fatty alcohols, announce the appointment of Mr. E. A. Jones as export sales manager. Mr. Jones joined the company in 1948.

MR. W. J. DONNELLY, technical representative, Midlands area, for the scientific and industrial division of Sunvic Controls Ltd. has been transferred to the application engineering department at the works, Harlow, Essex.

The United Steel Companies Ltd, announce that Mr. S. R. Howes, at present director and general manager of Samuel Fox & Co. Ltd., of Stockbridge, is to retire on 30 June, but will remain on the board of Samuel Fox & Co. Ltd. Mr. Howes will be succeeded by Mr. H. P. Forder, at present director and deputy general manager of the branch.

MR. CHARLES W. LUDBROOK, adviser to the contruction manager of Ashmore Benson Pease & Co. Ltd., Stockton-on-Tees, has retired after 53 years with the firm. Beginning with the firm as an apprentice, he was the construction manager before being appointed construction adviser two years ago.

The Baird & Tatlock Group of Companies announce that SIR BERNARD KEEN, D.Sc., F.Inst.P., F.R.S., and MR. A. G. P. POWELL, B.A., have been elected to the board of Baird & Tatlock (London) Ltd. and MR. W. C. JOHNSON, M.B.E., F.R.I.C., and Mr. H. N. RICKETTS, B. Sc., A.C.G.F.C., F.R.I.C., have been elected to the board of Hopkin & Williams Ltd. Sir Bernard Keen joined Baird & Tatlock (London) Ltd. in 1955 as chief scientific adviser and in January 1956 took charge of the Research and Development Division. Mr. A. G. P. Powell joined Baird & Tatlock (London) Ltd. in 1924 as sales representative in the North of England and became sales manager in 1935. Mr. W. C. Johnson joined Baird & Tatlock (London) Ltd. in 1922 and became chief chemist of Hopkin & Williams in 1936. Mr. H. N. Ricketts joined Hopkin & Williams Ltd. in 1925 and became works manager in 1937.

MR. R. D. Burn, technical consultant of the British Metal Corp., who has accepted an invitation to become a member of the technical committee of the International Tin Research Council, is a former director of James Bridge Copper Works, Darlaston.

MR. JAMES A. WOODROFFE, of the Textile Fibres department of E. I. Du Pont de Nemours has arrived in Bogotá to serve as technical consultant to the rapidly growing textile industry in Colombia. He will offer technical assistance to manufacturers and retailers on the processing and merchandizing of fabrics and garments made in Colombia with Du Pont fibres. Mr. Woodroffe has been associated with the Latin American textile industry for the past 11 years. Prior to his assignment in Colombia he received advanced training in the processing of Du Pont's 'Orlon' acrylic fibre, 'Dacron' polyester fibre, nylon and other man-made fibres.

MR. DONALD GOULDING has been appointed head of the export sales department of Winston Electronics Ltd., of Shepperton, Middlesex. Born in Wigan, Lancashire, in 1924, Mr. Goulding was educated at Wigan Grammar School and Wigan Technical College. He left BOAC. with whom he was a wireless operator, in 1948 to join EMI Ltd. In 1951, he joined Park Davis and Co. Ltd., as territorial sales manager for the Middle East and Africa.

MR. HARRISON C. GIVENS, Jr., former manager of the manufacturing department, textile division, Celanese Corp. of America, has been made vice-president-operations, of Celanese International Corp. In this new executive capacity, Mr. Givens will be responsible for providing liaison between Canadian Chemical & Cellulose Co. Ltd.. the Celanese affiliate in Canada, and Celanese Corp. of America. Mr. Givens joined Celanese in 1933 at its Cumberland, Maryland, acetate fibre producing plant. He was made plant manager at Cumberland in 1949, serving in that capacity until 1952 when he became the manager of plant operations of the company's newly-created textile division. In 1955, he was made manager of the Division's Manufacturing Department.

#### Obituary

The death is announced of MR. FREDERICK WILLIAM MILES, managing director of the Coventry Metallurgical Co. Ltd., which he founded in 1915. Mr. Miles, who was 81, went to Coventry in 1895, and worked for a number of engineering firms before starting business on his own account as a metal refiner. Two of his sons, MR. H. B. MILES and MR. F. W. MILES, codirectors, will carry on the business.

#### New Division

A NEW name in the chemical world is that of Chemicals & Feeds Ltd., of 55-61 Moorgate, London EC2. This firm is an associate of P. Leiner & Sons Ltd., the Treforest Chemical Co. Ltd., The Miskin Lime Co. Ltd., Pattullo Higgs & Co. Ltd., and several other UK and overseas concerns.

This company formerly concentrated on animal feedstuffs but on 1 February Mr. J. R. Giles, previously with Chas. Page & Co. Ltd., was appointed chemical sales manager and a chemical department has been created.

Apart from normal trading in a range of industrial chemicals, the sales of certain commodities being manufactured by other companies of the group will be handled by the new division.

#### €9m. Chemicals Plant

FOLLOWING the recent announcement that Esso Petroleum Co. Ltd. is to produce raw materials for the first full-scale rubber-from-oil plant in the UK, it is announced that this project involves the construction of a £9,000,000 chemicals-from-oil plant at the Esso Refinery, Fawley, Hampshire.

This plant, which is expected to be completed in 1958, will process nearly 250,000 tons a year of raw petrol into a large volume of chemical materials including such petroleum gases as ethylene, propylene, butylene and butadiene. From these gases a wide range of plastics will be produced. Output from the plant will also provide the basis for nylon and other synthetic textiles, washing powders, as well as synthetic rubber. The plant will also be capable of producing petroleum resins and feedstocks for carbon black manufacture.





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#### Commercial Intelligence

The following are taken from the printed reports, but we cannot be responsible for errors that may occur.

#### Mortgages & Charges

(Note.—The Companies Consolidation Act of 1908 provides that every Mortgage or Charge, as described herein, shall be registered within 21 days after its creation, otherwise it shall be void against the liquidator and any creditor. The Act also provides that every company shall, in making its Annual Summary, specify the total amount of debt due from the company in respect of all Mortgages or Charges. The following Mortgages or Charges have been so registered. In each case the total debt, as specified in the last available Annual Summary, is also given—marked with an \*-followed by the date of the Summary but such total may have been reduced.)

DISINCRUSTANT MARSEILLAIS CO. LTD. Manchester, manufacturers of boiler scale removal preparations etc.—2 March, mort., to Manchester Corporation securing £30,000 (or three quarters of value of a building when completed, whichever is the less); charged on company's interest in a building agreement dated 5 December, 1955, relating to property at Shentonfield Road. Sharston, Manchester. \*——. 21 July, 1955.

#### Company News

#### Evans Medical Supplies Ltd.

The board of Evans Medical Supplies Ltd. is maintaining the final dividend on the increased capital of £750,000 at the previous rate of 8½ per cent. With the unchanged interim on the old £538,722 capital the total for 1955 is again 10 5/6 per cent. Group trading profits totalled £373,321, against £393,825 for 1954. Owing to a lower tax charge, the net profit is higher at £142,148, compared with £135,983 for 1954.

#### Unilever & Unilever NV

The boards of Unilever and Unilever NV will recommend to the annual meetings to be held on 24 May declaration of final ordinary dividends, payable on 7 June. Unilever's recommended final dividend is 9½ per cent, making 15½ per cent, and Unilever NV's final is 8½ per cent, making 14 per cent. Totals are the same as for 1954 but payable on capitals increased by one-for-four scrip issues.

#### Yardley & Co.

Yardley & Co., manufacturers of perfumery, cosmetics and soap, is stepping-up the dividend on the £722,700 ordinary capital from 45 per cent to 52½ per cent, less tax, with a final payment of 37½ per cent, against 30 per cent. The preliminary statement for 1955 shows a sharp expansion on group net profit from £475,335 to £634,768, after an increased tax charge of £827,969, against £623,220.

#### United Premier Oil & Cake

Group profit of United Premier Oil & Cake Co. Ltd. for 1955 is £324,548, including £14,356 relating to previous years, compared with £571,677, including £35,187 relating to earlier years. The reduction in profit is attributed to difficult trading conditions in the seed crushing section of the group during the second half of 1955. Conditions have since shown some improvement. The final dividend of 9d (unchanged) per ordinary unit of 5s makes 20 per cent (unchanged).

#### The Bradford Dyers' Association

Speaking at the annual general meeting of the Association, Mr. James Ewing, the chairman, said that with the exception of the

continued on page 868

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#### Company News

continued from page 866]

Canadian subsidiary, Dominion Dyeing & Printing Co. Ltd., the Association's overseas enterprises had continued to make satisfactory progress. During the financial year which ended 30 November 1955, the Canadian subsidiary had again showed a . loss. In the last six years the Association had spent nearly £3,000,000 in maintaining the production units of the home branches. Recently a new company, Silicone Processes Ltd., in which Monsanto Chemicals Ltd., Union Chemique Belge, and the Association each hold one-third interest was formed. Another new company, Proban Ltd., in which the Association holds an equal interest with Albright & Wilson Ltd.. has begun the production of a new washable, anti-flame finish for cotton known as 'Proban'.

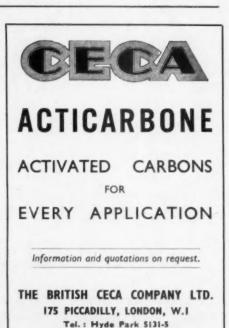
#### Redfern's Rubber Works Ltd.

At the recent annual general meeting in Hyde, Mr. T. H. Redfern, the chairman, presiding, said that the group's target remained at £100,000 per year as a basis for raising more share capital for the next major phase of expansion which will require another building, new basic plant, and a large-scale upheaval and a moving around of existing heavy machinery. In view of the credit squeeze, he said, and the need for more working capital, it was deemed prudent in 1955 to be less extended on short term borrowing. The year was a difficult one for the company, and when the interim dividend was announced the directors informed the shareholders that the company had difficulties. The present setback he forecast, may extend into 1956.

#### Chemical Trades' Unemployed

The Ministry of Labour reports that at 13 February there were 3,722 chemical workers unemployed in the UK. Of these, the largest number, 1,438 were chemical and dyes workers; explosives and fireworks (739); soaps, candles, glycerine, polishes, ink and matches (386); pharmaceuticals (318).





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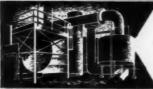
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#### MINERAL DRESSING DIVISION

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#### **ENGINEERING DIVISION**

Process and plant are offered for the manufacture of nitrogen and phosphatic fertilisers, sulphuric acid and nitric acid for acid concentration, the recovery of sulphur from low-grade ores and sulphuric acid from pickle liquor and refinery sludge—all in co-operation with the Chemical Construction Corporation of New York.



#### AGRICULTURAL CHEMICALS DIVISION

Extensive laboratory experiments and practical crop-cultivation tests are carried out on fertilisers for every type and conditions of soil. Among the principal raw materials produced in bulk is Florida Pebble Phosphate for the manufacture of Phosphatic Fertilisers and Phosphoric Acid, and Insecticides.



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Chemical Construction Corporation of New York, U.S.A.

### Next Week's Events

#### MONDAY 16 APRIL

#### SCI (Pesticides Group)

London: Rooms of The Chemical Society, Burlington House, Piccadilly W1, 5.30 p.m. 'Pesticides in Retrospect & Prospect' by R. A. E. Galley, B.Sc., Ph.D., A.R.C.S., D.I.C.

#### WEDNESDAY 18 APRIL

#### The Chemical Society

Dublin: University College, 7.45 p.m. 'The Organization of Intracellular Reactions' by F. Winder, M.Sc.

#### Institution of Chemical Engineers

Chester: The Grosvenor Hotel, 7 p.m. Joint meeting of North Western Branch and the Chester Section of Institute of Petroleum.

#### SCI (Corrosion Group)

London: Rooms of The Chemical Society, Burlington House, Piccadilly W1, 6.30 p.m. Annual general meeting and spring lecture 'Pitting & Cracking' by Dr. U. R. Evans, F.R.S.

#### Institute of Fuel

London: Institution of Civil Engineers, Great George Street SW1, 5.30 p.m. Annual corporate meeting.

#### SCI (Newcastle)

Newcastle-on-Tyne: King's College, 6.30 p.m. Annual general meeting followed by lecture by Professor G. R. Clemo, D.Phil., D.Sc., F.R.S.

#### THURSDAY 19 APRIL

#### The Chemical Society

Belfast: The Queen's University, 7.45 p.m. 'Adsorption by Porous Solids' by Professor D. H. Everett, M.B.E., M.A., D.Phil.

#### The Royal Society

London: The Society's Apartments, Burlington House, Piccadilly W1, 4.30 p.m. The Bakerian Lecture 'Addition Polymerization' by Professor H. W. Melville, D.Sc., F.R.S.

#### RIC (London Section)

Luton: Town Hall, George Street, 7.30 p.m. 'Hydrogen Peroxide—Modern Aspects of an Old Chemical' by W. S. Wood, B.Sc., A.M.I.Chem.E., F.R.I.C.

#### SCI (Road & Buildings Group)

London: Lecture Hall, Junior Institution

of Engineers, Pepys House, Rochester Row SW1, 6 p.m. Annual general meeting and lecture 'Dense Tar Surfacing' by A. R. Lee and H. G. Barnes.

#### SCI (Manchester)

Manchester: Chemistry Lecture Theatre, 10.30 a.m. to 6.30 p.m. Symposium on Lubrication' in conjunction with The Chemical Society, the Institute of Petroleum, and the Royal Institute of Chemistry.

#### FRIDAY 20 APRIL

#### SCI (Fine Chemicals Group)

London: William Beveridge Hall, University of London WC1, 7 p.m. Debate on 'That Science Can Provide as Good an Education as the Humanities. Speakers: R. P. Linstead, C.B.E., A.M., Ph.D., D.Sc., A.R.C.S., F.R.S.; A. R. J. P. Ubbelohde, M.A., D.Sc., B.Sc., F.R.S.; B. C. Halward; and H. D. P. Lee.

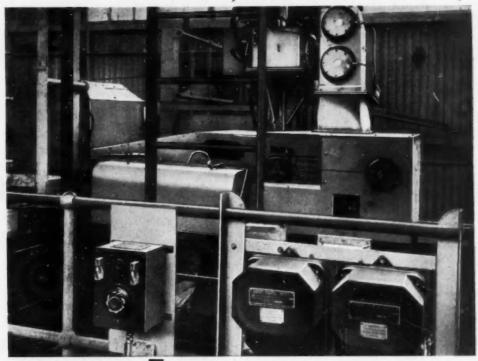
#### The Chemical Society

St. Andrews: Chemistry Department, St. Salvators College, St. Andrews, Scotland. Joint meeting with the University Chemical Society. Lecture 'New Kinds of Macromolecules' by Professor H. W. Melville, D.Sc., F.R.S.

#### Babcock Form New Division

THE formation of a materials handling division, which will co-ordinate in one group the various functions hitherto perby separate departments, is formed announced by Babcock & Wilcox Ltd. The new division will deal with all types of materials handling, including conveyors together with Hydrojet and Hydrovac ash and dust handling plant, and a new low pressure pneumatic fly ash handling system, but not with cranes or furnace-charging equipment which will still be the province of the Crane Department, as at present. The new division will be officially formed in June. and will be accommodated at Lynton House, Tavistock Square, London WC1.

The manager of the new division will be Mr. F. S. Stent, at present a director of the Marco Conveyor & Engineering Co. Ltd. Mr. R. A. Taylor, hitherto in charge of the conveyor department of Babcock & Wilcox, has been appointed chief technical advisor to the new division.



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#### Market Reports

LONDON.-A steady demand for the routine industrial chemicals has been reported during the past week, and the movement against contracts to the chief home outlets has been resumed on a good scale. The fertilizers market continues to expand with substantial quantities going into consumption. Export trade in chemicals has been fully maintained with the returns for the first two months of the year higher than for the same period in 1955. Apart from the metal compounds, prices have remained very steady. Copper sulphate has been reduced to £120 15s. per ton less 2 per cent fob Liverpool, following the lower price for the metal. A steady business continues to be done in most of the coal-tar products with cresylic acid enjoying a better demand.

MANCHESTER.—Fairly steady trading conditions have been reported this week in most sections of the Manchester market for heavy chemical products and the general undertone as regards prices is firm. A wide range of textile chemicals is being called for in reasonably good quantities, and other leading industrial outlets in Lancashire and the West Riding are taking satisfactory supplies against contracts. A fair number of fresh inquiries, both home and export, are circulating. Good quantities of sulphate of ammonia and other fertilizers are moving into consumption, and a steady demand for both the light and heavy tar products continues.

GLASGOW.—From most sections of the Scottish heavy chemical market the report for the past week is that business has been well maintained and on a good level. With a few exceptions prices on the whole have remained firm. The seasonal demand for fertilizer is still showing continued improvement, both for immediate and forward delivery. Numerous inquiries are being received for export, and the market remains fairly active.

#### R. & J. Dempster Ltd.

IT HAS been drawn to our attention that the omission of three words in an item in our issue of 24 March is most misleading. The item concerned is that headed 'Gas & Chemical Engineers' (on page 703) dealing with the activities of R. & J. Dempster Ltd., the constructional gas and chemical engineers of Newton Heath, Manchester.

In the third paragraph of this item it is stated that the firm's spirally-guided gasholders were introduced in 1948. This of course is quite incorrect and the first sentence should have read: 'The firm's spirally-guided gasholders were introduced to the European continent in 1948.' R. & J. Dempster have been manufacturing gasholders of this type for over 65 years, many of them being up to as much as 7,000,000 cu, ft, in capacity. The statement in the paragraph mentioned above to the effect that since 1948 gasholders of the spirally-guided design totalling over 40,000,000 cu. ft. capacity had been installed referred only to the Continent and to spiral holders of Dempster design installed by, or ordered from, their associated company and their sub-licensees.

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#### Confectionery Analysis

A PAPER on the 'Standardization of Methods of Analysis in Confectionery' is to be given by Mr. C. L. Hinton, F.R.I.C., superintendent of research of the British Food Manufacturing Industries Research Association, at the fourth General Assembly of the International Sugar Confectionery Manufacturers' Association in Rome from April 19-21.

Mr. Hinton is chairman of the Assembly's technical committee. It has held several meetings in Paris to try to agree upon standard reference methods both for raw materials and finished products.

So far many different methods of analysis have been compared. A number have been adopted and others referred back to the various national associations. The findings of the committee have to receive the official approval of the Assembly at its Rome meetings.



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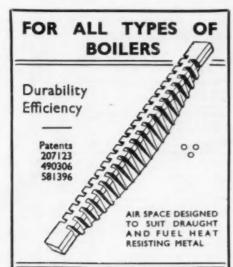


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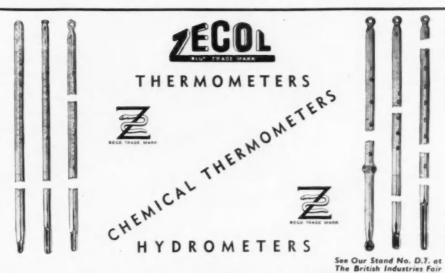
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